Release notes for ENDF/B Development e-094_Pu_000 evaluation



October 13, 2016

• fudge-4.0 Warnings:

1. Mislabled emitted particle Reading ENDF file: ../e-094_Pu_000.endf (Error # 0): ZAP messed up

WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0

2. FIXME: Generic fudge unimplemented message reaction label 1: e- + Pu + gamma [bremsstrahlung] / Product: e- (Error # 0): Generic unimp (c)

WARNING: Checking not yet implemented for energyLoss type data

3. FIXME: Generic fudge unimplemented message reaction label 2: e- + Pu [excitation] / Product: e- (Error # 0): Generic unimp (c)

WARNING: Checking not yet implemented for energyLoss type data

• fudge-4.0 Errors:

1. Calculated and tabulated thresholds don't agree reaction label 0: e- + Pu [large angle Coulomb scattering] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!

2. Calculated and tabulated thresholds don't agree reaction label 1: e- + Pu + gamma [bremsstrahlung] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!

3. Calculated and tabulated thresholds don't agree reaction label 2: e- + Pu [excitation] / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!

4. Calculated and tabulated thresholds don't agree reaction label 3: e- + e- + Pu1s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 122350. eV!

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 23122. eV!

6. Calculated and tabulated thresholds don't agree reaction label 5: e- + e- + Pu2p1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 22371. eV!

7. Calculated and tabulated thresholds don't agree reaction label 6: e- + e- + Pu2p3/2 / Cross section: (Error # 0): Threshold mismatch

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WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 18071. eV!
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- 8. Calculated and tabulated thresholds don't agree reaction label 7: e- + e- + Pu3s1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5902.1 eV!
- 9. Calculated and tabulated thresholds don't agree reaction label 8: e- + e- + Pu3p1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5548.5 eV!
- 10. Calculated and tabulated thresholds don't agree reaction label 9: e- + e- + Pu3p3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4549.9 eV!
- 11. Calculated and tabulated thresholds don't agree reaction label 10: e- + e- + Pu3d3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3977.8 eV!
- 12. Calculated and tabulated thresholds don't agree reaction label 11: e- + e- + Pu3d5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3776.9 eV!
- 13. Calculated and tabulated thresholds don't agree reaction label 12: e- + e- + Pu4s1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1533.7 eV!
- 14. Calculated and tabulated thresholds don't agree reaction label 13: e- + e- + Pu4p1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1370.5 eV!
- 15. Calculated and tabulated thresholds don't agree reaction label 14: e- + e- + Pu4p3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1106. eV!
- 16. Calculated and tabulated thresholds don't agree reaction label 15: e- + e- + Pu4d3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 842.55 eV!
- 17. Calculated and tabulated thresholds don't agree reaction label 16: e- + e- + Pu4d5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 794.17 eV!
- - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 446.08 eV!

- 19. Calculated and tabulated thresholds don't agree reaction label 18: e- + e- + Pu4f7/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 433.09 eV!
- 20. Calculated and tabulated thresholds don't agree reaction label 19: e- + e- + Pu5s1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 346.64 eV!
- 21. Calculated and tabulated thresholds don't agree reaction label 20: e- + e- + Pu5p1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 281.33 eV!
- 22. Calculated and tabulated thresholds don't agree reaction label 21: e- + e- + Pu5p3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 216.42 eV!
- 23. Calculated and tabulated thresholds don't agree reaction label 22: $e^- + e^- + Pu5d3/2$ / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 119.5 eV!
- 24. Calculated and tabulated thresholds don't agree reaction label 23: e- + e- + Pu5d5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 109.85 eV!
- 25. Calculated and tabulated thresholds don't agree reaction label 24: e- + e- + Pu5f5/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 7.4 eV!
- 26. Calculated and tabulated thresholds don't agree reaction label 25: e- + e- + Pu5f7/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 6.25 eV!
- 27. Calculated and tabulated thresholds don't agree reaction label 26: e- + e- + Pu6s1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 53.12 eV!
- 28. Calculated and tabulated thresholds don't agree reaction label 27: e- + e- + Pu6p1/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 33.92 eV!
- 29. Calculated and tabulated thresholds don't agree reaction label 28: e- + e- + Pu6p3/2 / Cross section: (Error # 0): Threshold mismatch
 - WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 23.42 eV!

30. Calculated and tabulated thresholds don't agree reaction label 29: e- + e- + Pu7s1/2 / Cross section: (Error # 0): Threshold mismatch

WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.42 eV!

- xsectplotter Warnings:
 - $\begin{array}{ccc} 1. & {\rm Mislabled~emitted~particle} \\ & \textit{Error:~ZAP~messed~up} \end{array}$

stderr while processing crossSection

WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0 \dots [4 more lines]